Dočket No. 42141/RJP/E264

Delete the paragraphs from Page 117, line 13, through Page 118, line 18, and replace them with the following paragraphs:

--Rate Selection refers to the algorithm by which B chooses $(S_{i,desired}, b_{i,desired})$. Each of the algorithms presented use some or all of the following input statistics upon receiving packet P_{i} , (squared error refers to squared decision point error): Header rate, (s_{min}, b_{min}) ; Header error indicator, $X_{hdr,i} \in \{0,1\}$, O indicates error-free header, 1 indicates header error; Header sum of squared error, $\epsilon_{hdr,i}$; Header maximum squared error, $E_{hdr,i}$; Header length symbols), n_{hdr} ; Payload rates, (S_i, b_i) ; Payload error indicator, $X_{hdr,i} \in \{0,1\}$, 0 indicates error-free payload, 1 indicates payload error; Payload sum of squared error, € pld,i; Payload $maximum\ squared\ error,\ E_{pdi,i;}Payload\ length\ (symbols),\ n_{pld,i};FSE\ power\ for\ each\ symbol\ rate$ in S, P $_{\text{FSE},s,i}$; and Normalized, per-symbol ISI power estimate for each symbol rate in S, P $_{\text{ISI},s,i}$. Given these input statistics, each algorithm maintains state variables, performing computations based on the input statistics and state variables, first to select the new desired constellation size from R_s for each symbol rate in S, then to select the new desired symbol rate from all those in S. Two algorithms are presented, requiting different amounts of state storage and computation:(1) Mean Squared Error Algorithm and (2) Maximum Squared Error Algorithm. For the purpose of constellation size selection, we initially assume that only a single symbol rate, s, is under consideration, and that $s_i = x$ for all i.

With regard to the Mean Squared Error Algorithm, error rates of candidate constellations are estimated, selecting constellation to maximize throughput subject to maximum length packet, maximum PER constraint. If we assume that: probability of symbol error is independent from symbol to symbol, hence: